



# Board Meeting

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May 11, 2017  
Murfreesboro, Tennessee

# President's Report



BILL JOHNSON  
President and CEO

# TVPPA

Jack Simmons



# Working as Partners



**MURFREESBORO  
ELECTRIC  
DEPARTMENT**



# Preparing for Tomorrow's Jobs



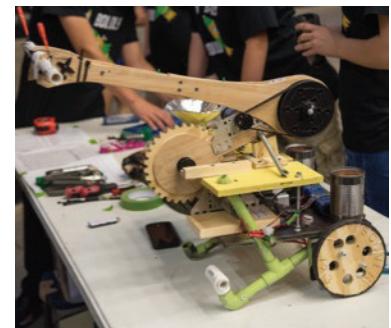
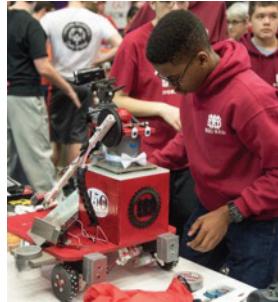
MIDDLE  
TENNESSEE  
STATE UNIVERSITY



# Solar-Power Student Competition



# Building STEM Skills



# Mission to Serve

## Energy

Delivering affordable,  
reliable power



## Environment

Caring for our region's  
natural resources

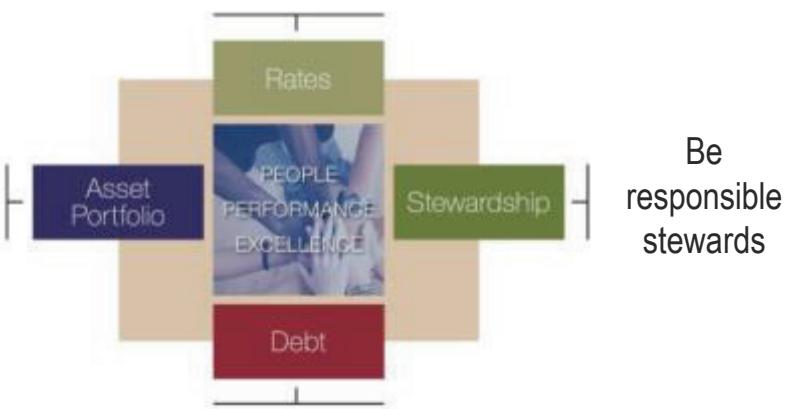
## Economic Development

Creating sustainable  
economic growth



Meet reliability  
expectations & provide a  
balanced portfolio

Maintain low rates



Live within our means

# Financial Performance

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Improve Operational Performance

Diversify Our Energy Mix

Improve TVA's Financial Health

Reduce Debt

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**Lower Power Rates**  
Reduced Operating Expenses by  
**\$800 Million**  
\$3 Billion in Capital Investments

ON TRACK TO  
ON THE  
**REDUCE** \$22 BILLION  
BY 2023

# Energy | Environment | Economic Development



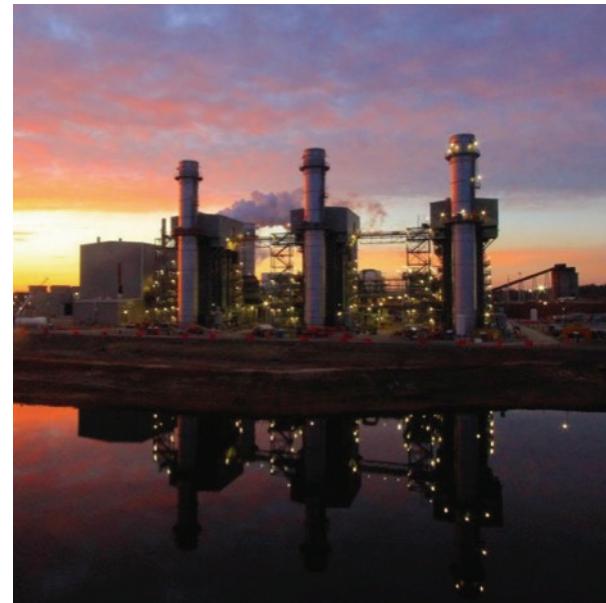
# Energy | Environment | Economic Development



# More Diverse Generation



Paradise



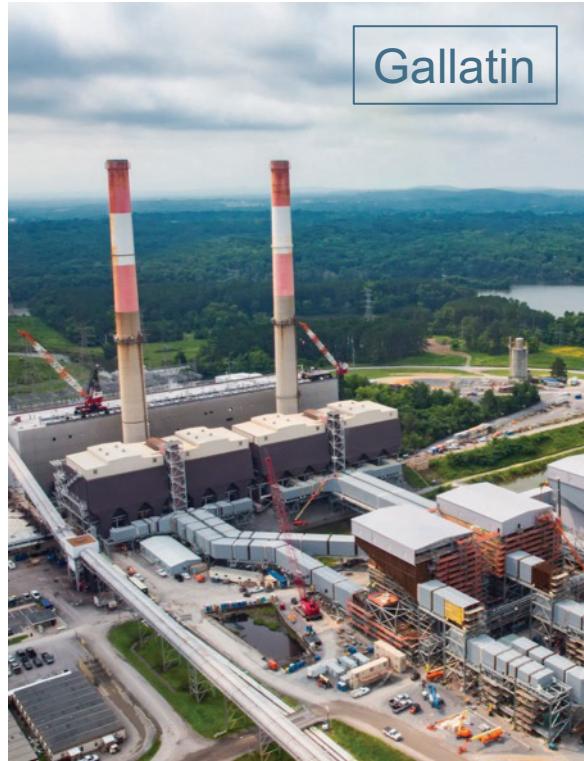
# Serving with Pride



Paradise



# Coal and Natural Gas Progress



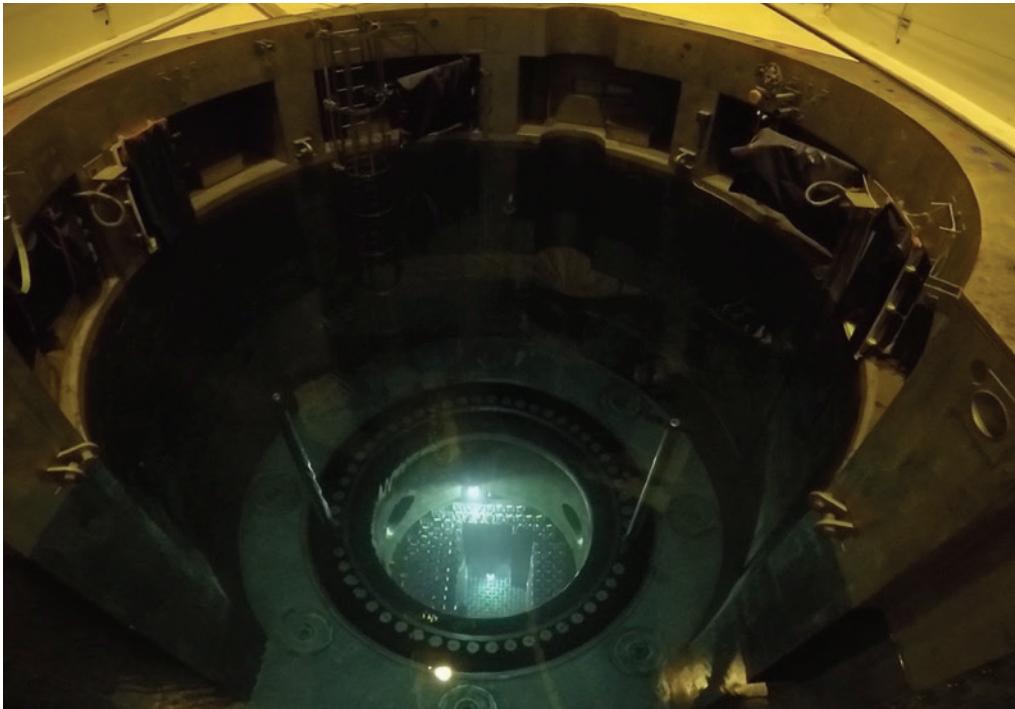
# Largest TVA-owned Solar



Solar Construction



# Safe and Reliable Nuclear Energy



Refueling



# Increasing Energy Efficiency



eScore



# Investing in the Power System



# Energy | Environment | Economic Development



# Managing the River System



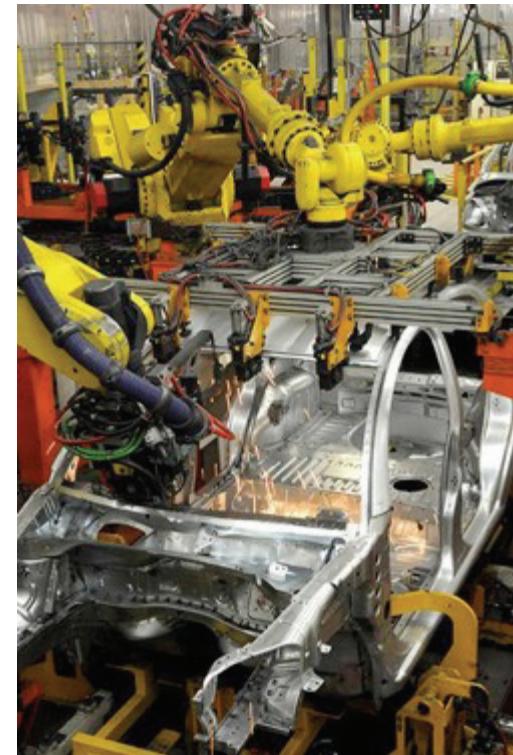
# Economic Value of Recreation



# Economic Value of Recreation



# Energy | Environment | Economic Development



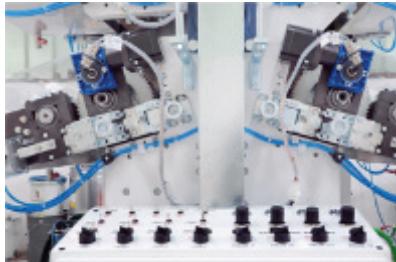
# Fostering Quality Growth

**46,100**

Jobs created and/or retained

**\$4.8 billion**

In capital investment

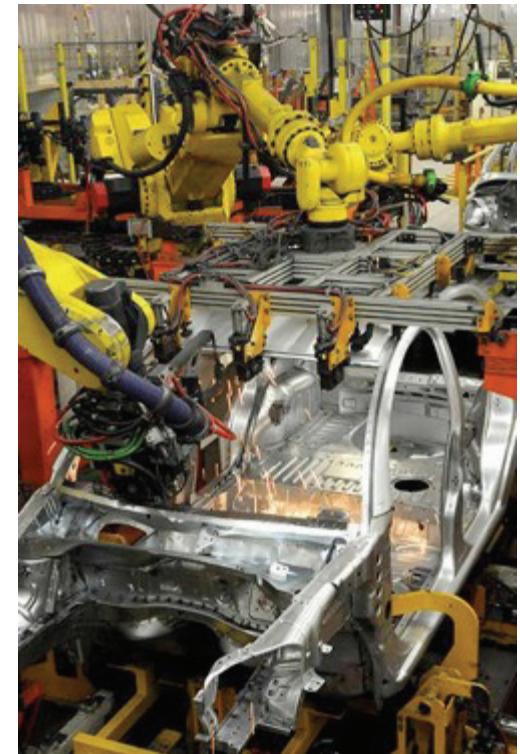


**ATTRACT**  
NEW COMPANIES  
& INVESTMENTS

**ENGAGE**  
COMMUNITIES & INDUSTRIES

**SERVE**  
WITH PARTNERS  
FOR ECONOMIC GROWTH

# Energy | Environment | Economic Development



# Serving the Valley



Bill Adams



Jessica Breaux

# Earning Industry Recognition (EPRI)



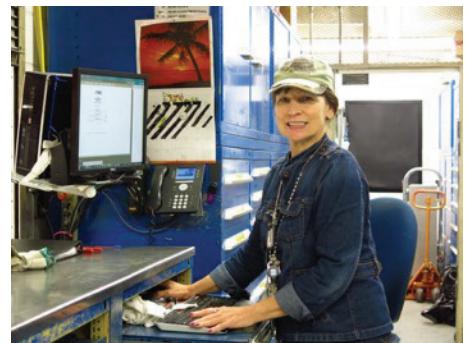
# Honored by Department of Justice



Pictured: Denise Smith with Melanie Ann Pustay, Director, Department of Justice, Office of Information Policy

# Best American Employers

USED WITH PERMISSION © 2017 FORBES LLC





# Board Meeting

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May 11, 2017  
Murfreesboro, Tennessee



# Finance, Rates, and Portfolio Committee



# Financial Performance Update



JOHN THOMAS

Executive Vice President  
and Chief Financial Officer

# Q2 Fiscal Year 2017

## **Net Income: \$313M**

- \$183M more than budget and \$32M above last year

## **Operating Revenues: \$131M above budget**

- Higher demand and fuel revenue

## **Operating & Maintenance Expenses: \$44M favorable to budget**

- Routine, Committed, and Other O&M favorability

## **Interest Expense: \$32M favorable to budget**

- Lower debt rates and short term debt balance favorability
- Total Financing Obligations (TFO): \$718M less than budget

# Q2 Summary Income Statement

**\$183M favorable due to operating revenue and lower expenses**

\$ million	FYTD 2017			FYTD 2016	
	Actual	Budget	Variance Fav/(Unfav)	Actual	'17 v '16 Fav/(Unfav)
Operating Revenue	\$ 5,093	\$ 4,962	\$ 131	\$ 4,851	\$ 242
Fuel & Purchased Power	1,557	1,452	(105)	1,448	(109)
Total O&M	1,440	1,484	44	1,409	(31)
Taxes, Depreciation, Other	1,106	1,187	81	1,157	51
Interest	677	709	32	556	(121)
Net Income (Loss)	\$ 313	\$ 130	\$ 183	\$ 281	\$ 32

# Q2 Summary Cash Flow Statement

TFOs were \$718M favorable to budget, reflecting \$350M of favorability FYTD 2017

\$ million	FYTD 2017			FYTD 2016	
	Actual	Budget	Variance	Actual	'17 v '16
Cash Flow from Operating Activities	\$ 1,516	\$ 1,302	\$ 214	\$ 1,330	\$ 186
Cash Flow used in Investing Activities	(1,302)	(1,439)	137	(1,613)	311
Cash Flow from Financing Activities	(214)	137	(351)	284	(498)
<b>Net Change in Cash &amp; Cash Equivalents</b>	-	-	-	1	(1)
<b>Ending Cash &amp; Short-Term Investments</b>	<u>\$ 300</u>	<u>\$ 300</u>	<u>-</u>	<u>\$ 301</u>	<u>\$ (1)</u>
<b>Ending Debt and Financing Obligations</b>	<b>\$ 25,954</b>	<b>\$ 26,672</b>	<b>\$ 718</b>	\$ 26,363	\$ 409
Statutory Debt	24,055	24,773	718	24,246	191

# Q2 Summary (Results v. Plan)

**Higher Peak Demand** – favorable demand revenue

**Lower Expenses** – depreciation, operating and maintenance, and interest

**Increased Fuel Cost** – lower hydro generation and higher gas prices

**Lower Debt Balance** – favorable cash flows resulting in less debt

# Strategic Fiber Initiative



MIKE SKAGGS

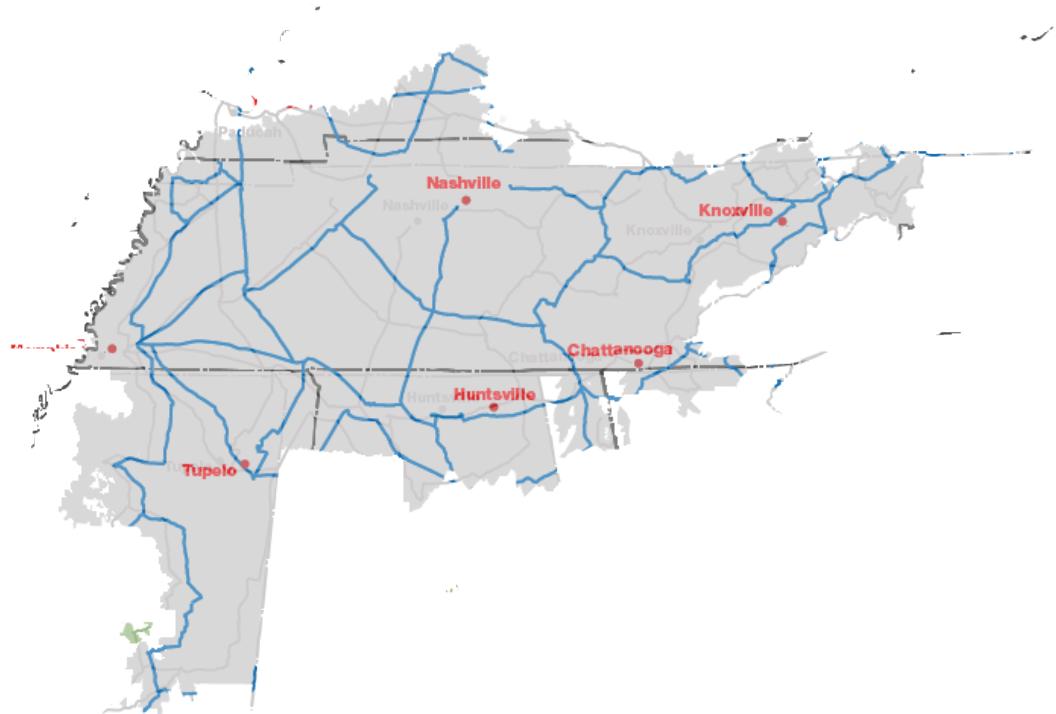
Executive Vice President  
Operations

# Connect the Valley – Purpose

- Upgrade and expand fiber optic backbone
- Improve TVA operations, reliability, and resiliency
- Improve TVA system communications
- Increase economic development
- Incorporate distributed resources efficiently
- Support efforts to bring broadband to rural locations

# Connect the Valley – Overview

- Maintain power rate competitiveness and affordability
- Upgrade/install approximately 3,500 miles of fiber optic network
- 5-10 year initiative



# Connect the Valley – Going Forward

- Initial routes and build-out to be refined to maximize operational and economic development benefits
- Partnerships to be developed and strengthened
- Project management processes to be followed
- Oversight and updates to be provided

# Connect the Valley – Recommendation

- Recommend approval of the Strategic Fiber Initiative, including authorization to the Chief Executive Officer to approve contracts, projects, and programmatic efforts in accordance with Board approved budgets

# Nuclear Fuel Fabrication Contract

JOE GRIMES

Executive Vice President  
Generation



# Topic

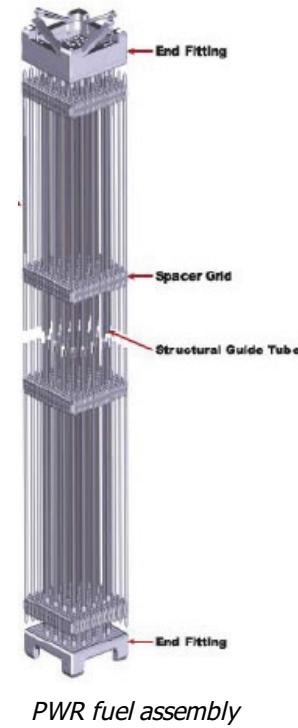
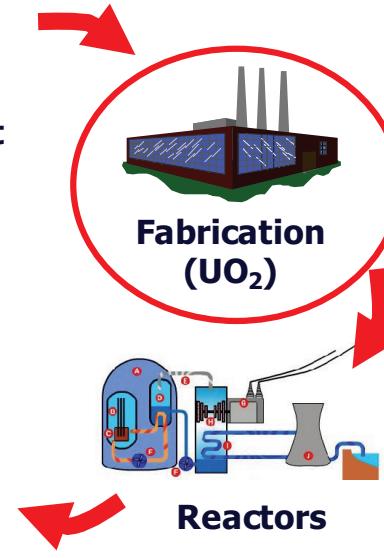
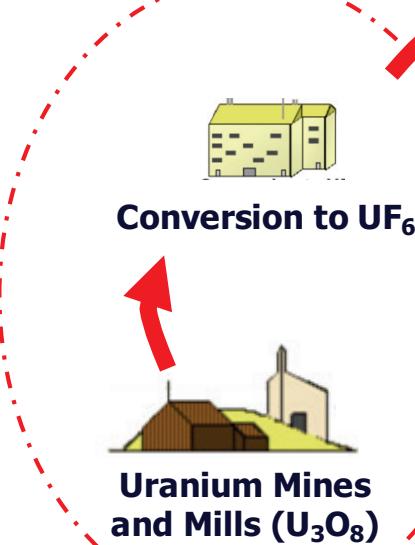
TVA must buy nuclear fuel fabrication to ensure an adequate and uninterrupted supply of fuel for our nuclear reactors at Sequoyah and Watts Bar

## **For Board Consideration in May 2017**

Delegate to the CEO the authority to approve a contract with Westinghouse or a successor entity; The contract would have a value of up to \$450 million and a proposed term of 14 years

# Background – Nuclear Fuel Cycle

Discussed in Uranium Feed Contract Presentation



PWR fuel assembly

# Background

Westinghouse provides competitive offer for fabrication:

- Contract would provide all of TVA's fabrication needs at Sequoyah and Watts Bar from 2021 through 2030
- Pricing compares favorably with competitive offers
- Utilizes proven technology and licensed product
- TVA will obtain appropriate credit assurance before signing a contract with Westinghouse

# Recommendation

- Delegate to the CEO the authority to approve a contract with Westinghouse or a successor entity; The contract would have a value of up to \$450 million and a proposed term of 14 years

# Uranium Feed Contract



JOE GRIMES

Executive Vice President  
Generation

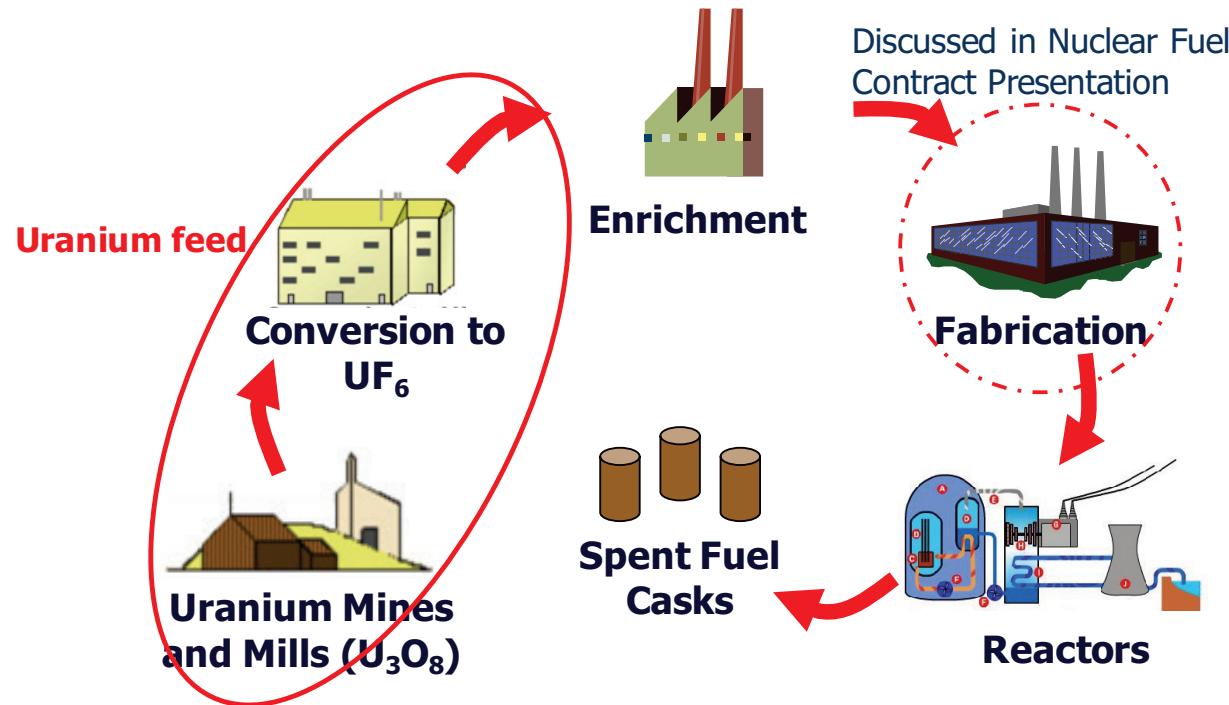
# Topic

TVA must buy uranium feed to ensure an adequate and secure supply of fuel for our nuclear fleet

## For Board Consideration in May 2017

Approve awarding contract to Louisiana Energy Services LLC (LES) for uranium feed for TVA's nuclear power plants through 2030 not to exceed \$500 million

# Nuclear Fuel Cycle Perspective



# Recommendation

Approve contract with Louisiana Energy Services LLC (LES) to provide uranium feed for TVA nuclear power plants through 2030 not to exceed \$500 million

# Coal Combustion Residuals Contract

JOE GRIMES

Executive Vice President  
Generation



# For Board Consideration

Approval of Authorization for the Chief Executive Officer (CEO) to approve contracts necessary for the execution of the coal combustion residual (CCR) and Clean Water Act related projects and activities

## Monetary

The total combined value of contracts under the proposed delegation will not exceed \$1.9 billion

## Term

The term of contracts approved under the proposed delegation will end on or before December 31, 2026

# Background

- A comprehensive strategy is in-progress to meet TVA's commitment to move from wet-to-dry CCR storage and comply with the CCR Rule
- The Environmental Protection Agency deems closure-in-place and closure-by-removal protective of the environment; TVA has reached the same conclusion after evaluation
- TVA must comply with the requirements of the Clean Water Act
- TVA has established a robust monitoring program to ensure long-term safe storage of CCR

# Background

- TVA will need to enter into contracts with various contractors to provide the requisite materials and services
- Contracts awarded under the proposed delegation are subject to the following:
  - Competitive bidding requirements set forth in the TVA Act and TVA policy
  - Work will be undertaken only to the extent funding is available under an approved budget
  - The Finance, Rates, and Portfolio Committee of the TVA board will be informed of the contracts entered into pursuant to the proposed delegation

# Recommendation

The Board is requested to authorize the CEO to approve the entering of contracts for the execution of the CCR Conversion Program and to enable TVA to achieve and maintain compliance with the Clean Water Act through 2026

The total combined value of contracts approved by the CEO under this delegation will not exceed \$1.9 billion



# Nuclear Oversight Committee



# Audit, Risk, and Regulation Committee





# People and Performance Committee





# External Relations Committee





# Board Meeting

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